





California Energy Commission

**Workshop on Transportation Energy Demand Forecasts and Options to Reduce Petroleum Fuel Use** 

May 17, 2005



### CleanFUEL USA Partners

Headquartered in Georgetown, Texas



Atlanta, Georgia:



Valley Forge, Pennsylvania:



Mutual Propane, California:



Delta Liquid Energy
California:







### The CFUSA Mission

#### **Vision**

- Significantly increase the use of propane as a clean air transportation fuel in the United States
- Reduce toxic tailpipe emissions, as well as reduce consumption of gasoline and diesel fuel

#### Goals

- Provide customers with convenient refueling in the same manner as they experience with gasoline or diesel refueling
- Provide propane customer with \$\$ fuel cost savings
- To offset up to 10% of gasoline and diesel used in the United States with Clean Burning Propane.





### What is Propane and Where Does it Come From?

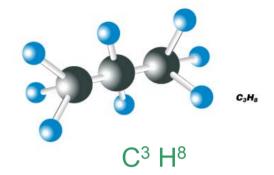
Simple Hydrocarbon, C3 H8

Byproduct of natural gas production, Natural Gas Liquids (NGL's), 60%



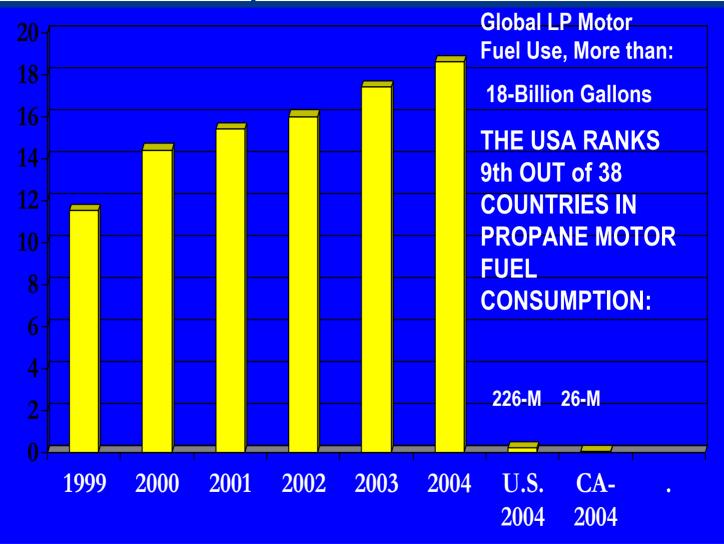
Propane is stored as a liquid and vaporizes at > -40 degrees F

Propane has a similar energy content, vehicle range, tank-size and weight as gasoline. Vehicle refueling times can be faster than gasoline





### Global Propane Motor Fuel Use







# Propane Motor Fuel Usage

 Global demand for LPG Motor Fuel has grown from 6.6% to ~8.4% of total world Propane gas consumption.

 The United States currently exports clean burning domestically produced propane to Mexico and other markets

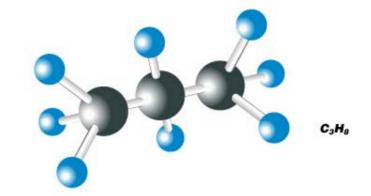
 Global supply of propane is expected to grow by 220-million barrels in 2005

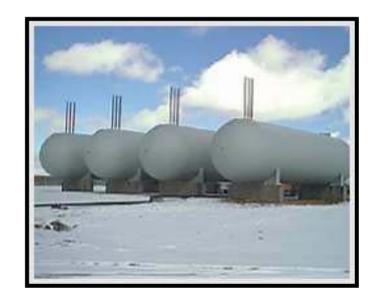




### **Fuel Quality**

- All Propane is not created equal
- Typically, natural gas plant production provides a higher quality of propane
- CleanFUEL USA Partners
   purchase product from
   suppliers that produce a higher
   quality of propane and are in
   the process of developing a
   standalone distribution system
   including rail terminals,
   transports and bulk storage
   facilities









# Motor Refueling Infrastructure

 Standalone Bulk Fuel Storage to Facilitate Refueling Network



Creating Partnerships
 California, Texas, and Colorado



 On The Fuel Island Gasoline Style Refueling







# Refueling is as Easy as 1, 2, 3

1. Slide Your CleanFUEL USA Access Card





2. Choose Your Form of Payment, or Set Up An Account















3. Start Refueling With Clean Burning Propane





F-150 / 5.4

8,000 GVW

\$1.70

# **Fuel Cost Comparison**

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X	FUEL TYPE	GVW	FUEL COST PER GALLON	MILES PER GALLON	ANNUAL MILES DRIVEN	ANNUAL FUEL COST	LPG Cost Savings
	GASOLINE / 8.1	35,000 GVW	\$2.51	5	35,000	\$17,570.00	\$4,347.78
L	E-350 / 6.8	14,000 GVW	\$2.51	12	35,000	\$7,320.83	\$1,911.74
	DIESEL / 5.9	35,000 GVW	\$2.55	6.5	35,000	\$13,730.77	\$508.55
	E-350 / 6.0	14,000 GVW	\$2.55	15	35,000	\$5,950.00	\$540.91
	PROPANE / 8.1	35,000 GVW	\$1.70	4.5	35,000	\$13,222.22	
	E-350 / 6.8	14,000 GVW	\$1.70	11	35,000	\$5,409.09	

14



\$4,250.00

35,000



### Propane Fuel Is Cost Effective

#### Return on Investment:

State of the art propane refueling sites cost approximately \$100,000 \*24 medium duty trucks traveling 35,000 miles a year will net a \$104,328 Fuel Cost savings over Gasoline



2005-2006 LPI GM 8.1

Historically, propane fuel has been is 20% to 30% less than gasoline; currently priced in California, today propane is 65% of gasoline

#### Clean FUEL USA Vehicle Fleet Incentives:

Propane refueling infrastructure can be made available with gasoline style refueling pumps, 24-hour fuel card access at a substantial fuel cost savings







### Propane-Powered Vehicles Benefits

- Propane is the most widely used and available alternative fuel worldwide. In the United States there are more than 15,000 refueling sites including 1,500 refueling locations in California, (900 AFV Friendly)
- 2005-2006 GM KL-5 option will add six new vehicle platforms that will be available in California (June 2005), HD 2500 & 3500
   C-4500, C-6500, C-7500 and C-8500
- Propane Fuel is currently 65% of gasoline and highly competitive with diesel
- Propane-powered vehicles experience similar refueling time and vehicle range when compared to that of gasoline, LPG is also highly completive with diesel
- Propane has proven to be a viable motor vehicle fuel choice, providing both economical and environmental benefits













# \$ Grant Funding \$

 Propane as an Alternative Fuel, Qualifies for Alternative Fuel Credits and Incentive Programs

#### CleanFUEL USA GRANT FUNDING PROJECTS

- CEC (29) Locations in California, ~\$500,000
- 2002 SEP Clean Cities Texas Cluster Project, \$250,000
- 2003 SEP Clean Cities Sacramento Cluster Project, \$250,000
- 2004 SEP Clean Cities Los Angeles Cluster, \$250,000

#### -PENDING PROPOSALS-

• "2005 SEP Clean Cities: East Bay, Western Riverside and Texas... \$450,000





### CFUSA California Locations



\*Sacramento (6 Future Sites)
SEP Clean Cities

\*San Francisco Intl' Airport

Santa Clara

**Paso Robles** 

San Luis Obispo

Pismo Beach

Santa Maria

Lost Hills (I-5, Hwy 46)

**Bakersfield** 

Lancaster

\*Los Angeles (6 Future Sites) SEP Clean Cities

Pomona, Monrovia, Sylmar, Valencia, Lakewood

**Tustin, City of Orange** 

San Diego (Regional Transit Center)





### Glacier National Park LP Bus



Low Floor Bus Technology, GM 8.1 Available 2005-2006

LPI Fuel System





# Changing of the Guard







# Reducing Petroleum Consumption

 Motor Fuel Friendly Propane Refueling Infrastructure is Expanding in California

CARB and the CEC Must Embrace AFV
 Conversions to Substantially Increase Alternative
 Fuel Use in California

 CARB and CEC Need to Formulate a Unified Policy to Reduce Petroleum Fuel Use, as well as Improve Air Quality Standards





### **How To Contact Us**



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